

4.(Amended) A method of forming a conductor comprising:

depositing an oxide layer over a planarized surface;

etching a trench on the oxide layer;

depositing a barrier layer on the oxide layer;

depositing a seed layer on the barrier layer;

removing the barrier layer and seed layer from unused areas of the oxide layer, leaving a seed area; and

depositing a conductor on the seed area after removing the barrier layer and seed layer from unused areas of the oxide layer.

8.(Amended) A method of forming a conductor comprising:

depositing a polymer layer over a planarized surface;

etching a trench on the polymer layer;

depositing a barrier layer on the polymer layer;

depositing a seed layer on the polymer layer;

removing the seed layer from selected areas of the polymer layer, leaving a seed area; and

depositing a conductor on the seed area after removing the barrier layer and seed layer from selected areas of the polymer layer.

12.(Amended) A method of forming a conductor comprising:

depositing an oxide layer over a planarized surface;

etching a trench on the oxide layer;

depositing a barrier layer tantalum on the oxide layer;

depositing a seed layer selected from the group consisting of gold, silver, and copper on the oxide layer;

removing the barrier layer and seed layer from unused areas of the oxide layer, leaving a seed area; and

depositing a conductor on the seed area after removing the barrier layer and seed layer from unused areas of the oxide layer.

15.(Amended) A method of forming a conductor comprising:

depositing an oxide layer over a planarized surface;

etching a trench on the oxide layer;

depositing a barrier layer tantalum on the oxide layer;

depositing a seed layer of gold on the oxide layer;

removing the barrier layer and seed layer from selected areas of the oxide layer, leaving a seed area; and

depositing gold on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer.

19.(Amended) A method of forming a conductor comprising:

depositing an oxide layer over a planarized surface;

etching a trench on the oxide layer;

depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the oxide layer;

depositing a seed layer of silver on the oxide layer;

removing the barrier layer and seed layer from selected areas of the oxide layer, leaving a seed area; and

depositing silver on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer.

23.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench on the oxide layer;
- depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the oxide layer;
- depositing a seed layer of copper on the oxide layer;
- removing the barrier layer and seed layer from selected areas or unused areas of the oxide layer, leaving a seed area; and
- depositing aluminum on the seed area after removing the barrier layer and seed layer from selected areas or unused areas of the oxide layer.

27.(Amended) A method of forming a conductor comprising:

- depositing a polymer layer over a planarized surface;
- etching a trench on the polymer layer;
- depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the polymer layer;
- depositing a seed layer selected from the group consisting of gold, silver, and copper on the polymer layer;
- removing the barrier layer and seed layer from selected areas of the polymer layer, leaving a seed area; and
- depositing a conductor on the seed area after removing the barrier layer and seed layer from selected areas of the polymer layer.

30. (Amended) A method of forming a conductor comprising:

- depositing a polymer layer over a planarized surface;
- etching a trench on the polymer layer;
- depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the polymer layer;

depositing a seed layer of gold on the polymer layer;
removing the barrier layer and seed layer from selected areas or unused areas of the polymer layer, leaving a seed area; and
depositing gold on the seed area after removing the barrier layer and seed layer from selected areas or unused areas of the polymer layer.

34.(Amended) A method of forming a conductor comprising:

depositing a polymer layer over a planarized surface;
etching a trench on the polymer layer;
depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the polymer layer;
depositing a seed layer of silver on the polymer layer;
removing the barrier layer and seed layer from selected areas of the polymer layer, leaving a seed area; and
depositing silver on the seed area after removing the barrier layer and seed layer from selected areas of the polymer layer.

38.(Amended) A method of forming a conductor comprising:

depositing a polymer layer over a planarized surface;
etching a trench on the polymer layer;
depositing a barrier layer selected from the group consisting of titanium, zirconium, and hafnium on the polymer layer;
depositing a seed layer of copper on the polymer layer;
removing the barrier layer and seed layer from unused areas of the polymer layer, leaving a seed area; and
depositing copper on the seed area after removing the barrier layer and seed layer from unused areas of the polymer layer.

42.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench on the oxide layer;
- depositing a barrier layer selected from the group consisting of zirconium and titanium on the oxide layer;
- depositing a seed layer of aluminum-copper on the oxide layer;
- removing the barrier layer and seed layer from selected areas of the oxide layer, leaving a seed area; and
- depositing a conductor on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer.

45.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench on the oxide layer;
- depositing a barrier layer of zirconium on the oxide layer;
- depositing a seed layer of aluminum-copper on the oxide layer;
- removing the barrier layer and seed layer from selected areas of the oxide layer, leaving a seed area; and
- depositing aluminum on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer.

50.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench on the oxide layer;
- depositing a barrier layer of titanium on the oxide layer;
- depositing a seed layer of aluminum-copper on the barrier layer;
- removing the barrier layer and seed layer from selected areas or unused areas of the oxide layer, leaving a seed area; and

depositing aluminum on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer.

56.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench having a top on the oxide layer;
- depositing a barrier layer of tantalum nitride on the oxide layer;
- depositing a seed layer of copper on the tantalum nitride layer;
- removing the barrier layer and seed layer from selected areas of the oxide layer;
- depositing a conductor on the seed area leaving a seed area; and
- depositing a layer of tantalum nitride above the conductor after removing the barrier layer and seed layer from selected areas of the oxide layer.

67.(Amended) A method of forming a conductor comprising:

- depositing an oxide layer over a planarized surface;
- etching a trench having a top on the oxide layer;
- depositing a barrier layer of tantalum nitride on the oxide layer;
- depositing a seed layer of copper on the barrier layer of tantalum nitride;
- removing the barrier layer and seed layer from selected areas of the oxide layer, leaving a seed area;
- depositing a layer of copper on the seed area after removing the barrier layer and seed layer from selected areas of the oxide layer; and
- depositing a layer of tantalum nitride above the layer of copper.